

## **ABSTRACT OF THE INVENTION**

**[000146]** A system and method for upstream transmission and the media access control of upstream transmission of groups of fixed sized cells, such as ATM cells in a point to multipoint optical network, such as a passive optical network. The upstream media access control scheme is responsive to grouping information reflecting a parameter of a group of fixed sized cells. The parameter may reflect the length of the relevant payload of the group the fixed sized cells.